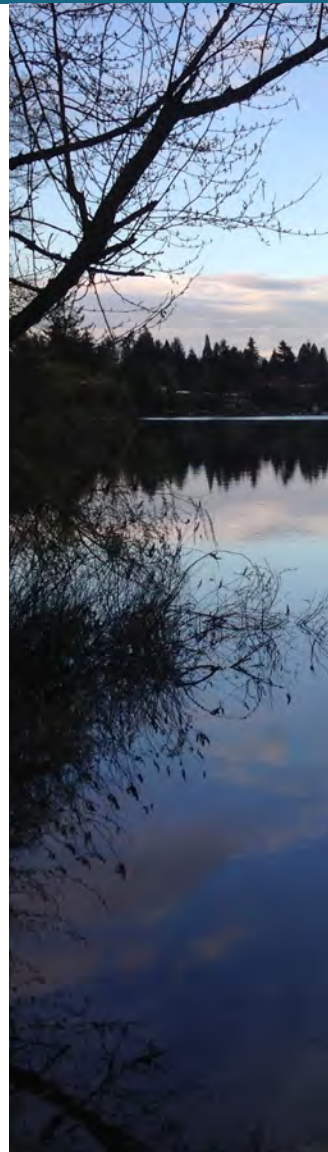




Waterfront Park at Hughes Property

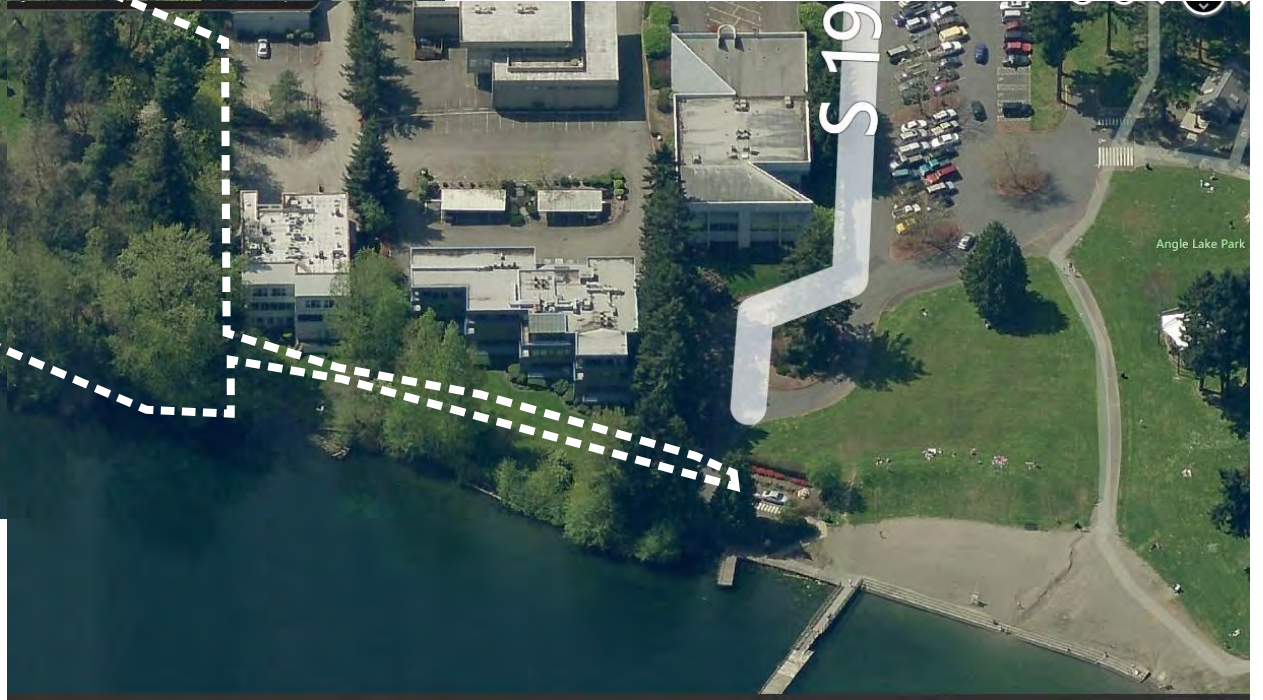
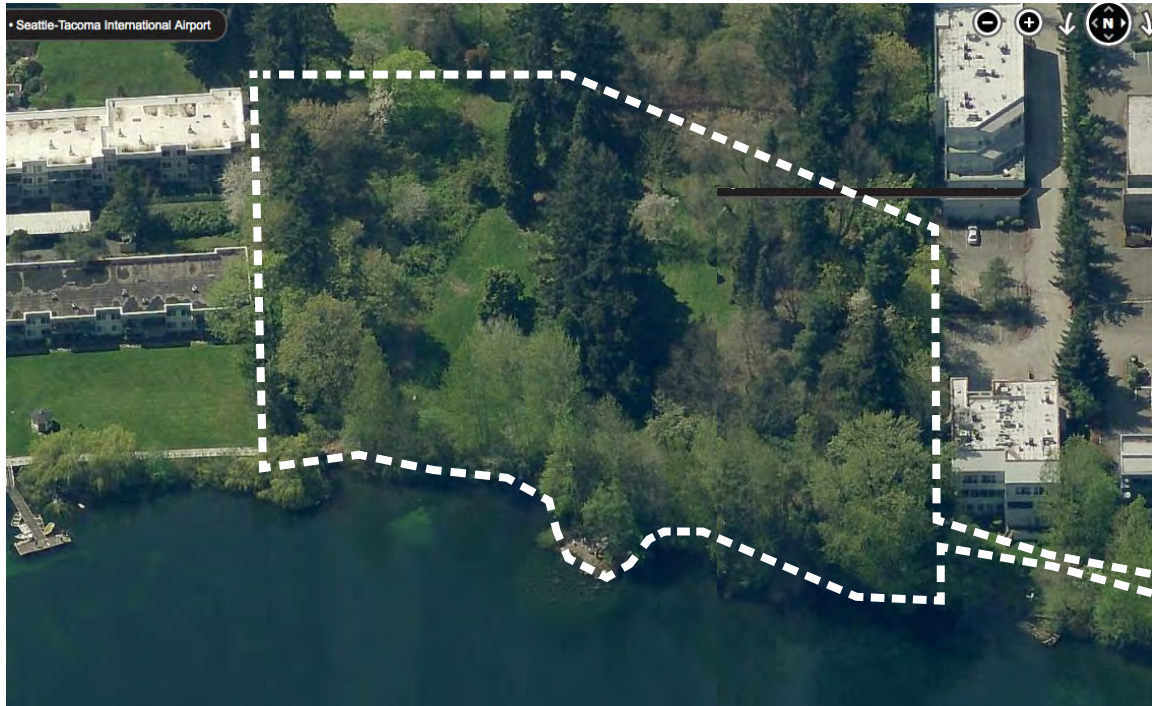


Barker
Landscape
Architects, P.S.












- Limbing up mature trees
- Salvage removed trees
- Improve views to the lake
- Expand passive recreation
- Areas for seating
- Hierarchy of trails
- Restore native understory
- Multiuse trail connections
- Shoreline accessibility
- Connection to International Boulevard and Angle Lake Park





- 
- Native plants, benches and pathways
 - Fenced edges
 - Public ADA and service access to Angle Lake Park
 - ADA access to the lakeshore
 - Fishing, wildlife viewing, hiking/jogging trails

SCHEMATIC PERSPECTIVE

Barker Landscape Architects - Lead Landscape Architect & Team Coordination



3002 NW 68th St
Seattle, WA 98107
Tel: 206.783.2870
Fax: 206.783.3212
www.barkerla.com

John Barker, Principal LA
Nic Morin, Sr. LA &
Project Manager

- Team Coordination & Project Management
- Public Outreach/Engagement
- Landscape Architecture

PROPOSED PROJECT STEPS

**PROJECT KICK-OFF
SUMMER 2016**

Access current site, review back ground information. Meet with city agency to define project scope.

**SITE ANALYSIS
(JULY-AUG 2016)**

Site analysis. Identify potential site resources, and coordinate with city agencies.

**PLAN DEVELOPMENT
(SEPT-OCTOBER 2016)**

Develop schematic alternative. Review with public agency. Prepare draft documents.

**PERMIT DOCUMENTS
(NOV-DEC 2016)**

Develop permit and construction documents.

**CONSTRUCTION
DOCUMENTS
(MARCH-APRIL 2017)**

Develop permit and construction documents.

**BID DOCUMENTS
(APRIL 2016)**

Develop construction and bid documents for Summer construction.



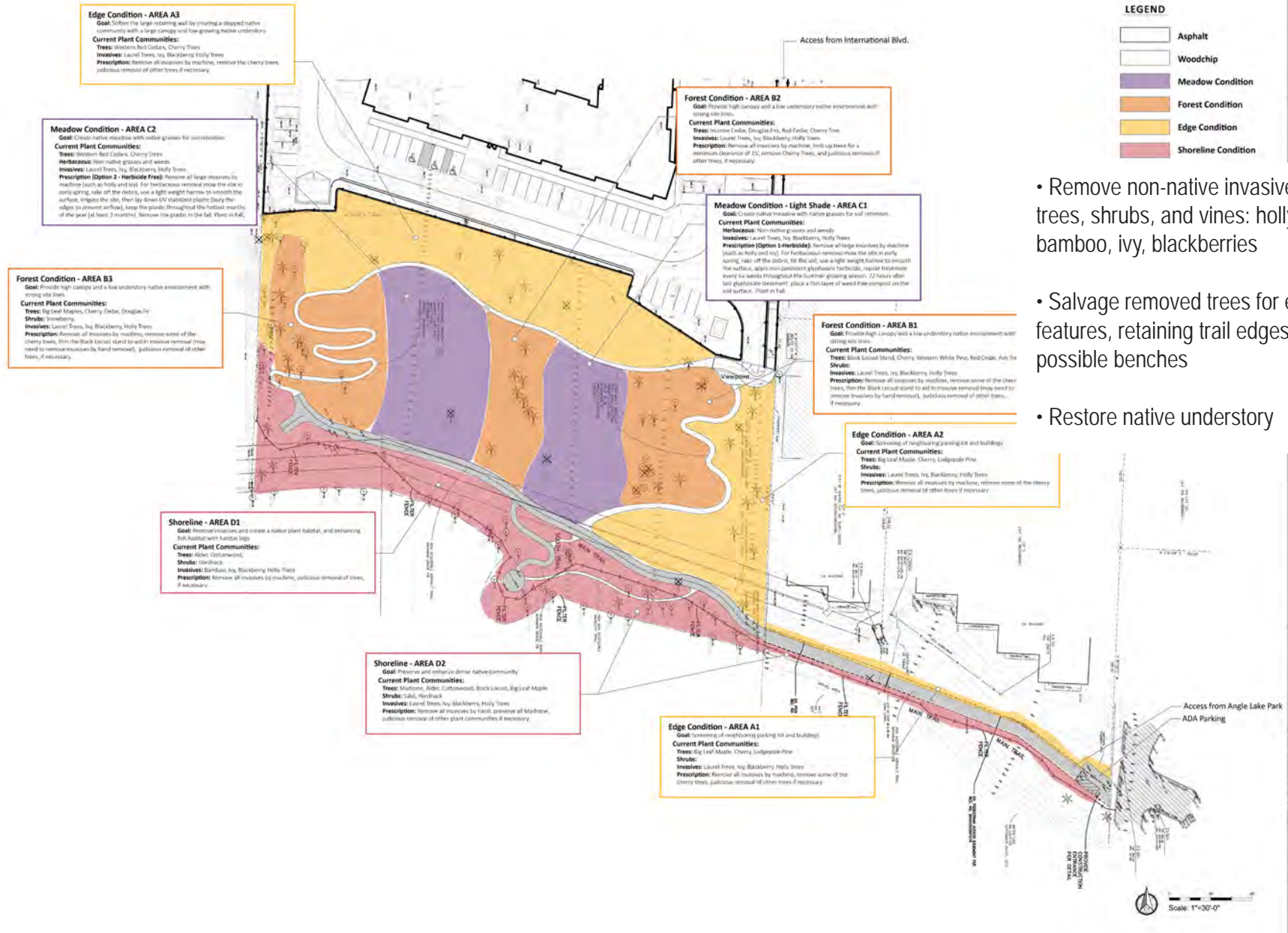




- > • Connection to International Boulevard
- ✓ • Limbing up mature trees
- ✓ • ADA Viewpoint
- Improve views to the lake
- ✓ • Fenced edges
- ✓ • Areas for seating
- Hierarchy of trails
- 8' wide asphalt ADA paved trail/ service road
- 4' wide ADA paved trail to shoreline
- 4' wide woodchip trails
- 2' wide restoration/nature trails
- Restore native understory
- Salvage removed trees for entry features, retaining trail edges, possible benches
- ✓ • Public ADA and service access to Angle Lake Park

ADA access to the lakeshore
Fishing station, benches,
interpretive signs

CONSTRUCTION DOCUMENTS



• Remove non-native invasive trees, shrubs, and vines: holly, bamboo, ivy, blackberries

• Salvage removed trees for entry features, retaining trail edges, possible benches

• Restore native understory



K E R
SCAPE
TECTS
52nd St.
VA 98107
783.2870
783.3212

Waterfront Park
Schematic Design
Sean Tate, VLA



NO.	DATE	DESCRIPTION

Schematic Design
Restoration Plan

L1
OF SHEETS

CONSTRUCTION DOCUMENTS

Edge Condition - AREA A3

Goal: Soften the large retaining wall by creating a stepped native community with a large canopy and low growing native understory.

Current Plant Communities:

Trees: Western Red Cedars, Cherry Trees

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription: Remove all invasives by machine, remove the cherry trees, judicious removal of other trees if necessary

Meadow Condition - AREA C2

Goal: Create native meadow with native grasses for soil retention.

Current Plant Communities:

Trees: Western Red Cedars, Cherry Trees

Herbaceous: Non-native grasses and weeds

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription (Option 2 - Herbicide Free): Remove all large invasives by machine (such as holly and ivy). For herbaceous removal mow the site in early spring, rake off the debris, use a light weight harrow to smooth the surface, irrigate the site, then lay down UV stabilized plastic (bury the edges to prevent airflow), keep the plastic throughout the hottest months of the year (at least 3 months). Remove the plastic in the fall. Plant in Fall.

Forest Condition - AREA B3

Goal: Provide high canopy and a low understory native environment with strong site lines.

Current Plant Communities:

Trees: Big Leaf Maples, Cherry, Cedar, Douglas Fir

Shrubs: Snowberry,

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription: Remove all invasives by machine, remove some of the cherry trees, thin the Black Locust stand to aid in invasive removal (may need to remove invasives by hand removal), judicious removal of other trees, if necessary.

Forest Condition - AREA B2

Goal: Provide high canopy and a low understory native environment with strong site lines.

Current Plant Communities:

Trees: Incense Cedar, Douglas Firs, Red Cedar, Cherry Tree

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription: Remove all invasives by machine, limb up trees for a minimum clearance of 15', remove Cherry Trees, and judicious removal of other trees, if necessary.

Meadow Condition - Light Shade - AREA C1

Goal: Create native meadow with native grasses for soil retention.

Current Plant Communities:

Herbaceous: Non-native grasses and weeds

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription (Option 1-Herbicide): Remove all large invasives by machine (such as holly and ivy). For herbaceous removal mow the site in early spring, rake off the debris, till the soil, use a light weight harrow to smooth the surface, apply non-persistent glyphosate herbicide, repeat treatment every six weeks throughout the Summer growing season. 72 hours after last glyphosate treatment, place a thin layer of weed free compost or soil surface. Plant in Fall.

Forest Condition - AREA B1

Goal: Provide high canopy and strong site lines.

Current Plant Communities:

Trees: Black Locust Stand,

Shrubs:

Invasives: Laurel Trees, Ivy

Prescription: Remove all invasives by machine, thin the Black Locust stand to aid in invasive removal (may need to remove invasives by hand removal), judicious removal of other trees, if necessary.

Edge Condition - AREA A2

Goal: Screen building and provide a native plant habitat.

Current Plant Communities:

Trees: Big Leaf

Shrubs:

Invasives: Laurel Trees, Ivy

Prescription: Remove all invasives by machine, judicious removal of other trees, if necessary.

Shoreline - AREA D1

Goal: Remove invasives and create a native plant habitat, and enhancing fish habitat with habitat logs

Current Plant Communities:

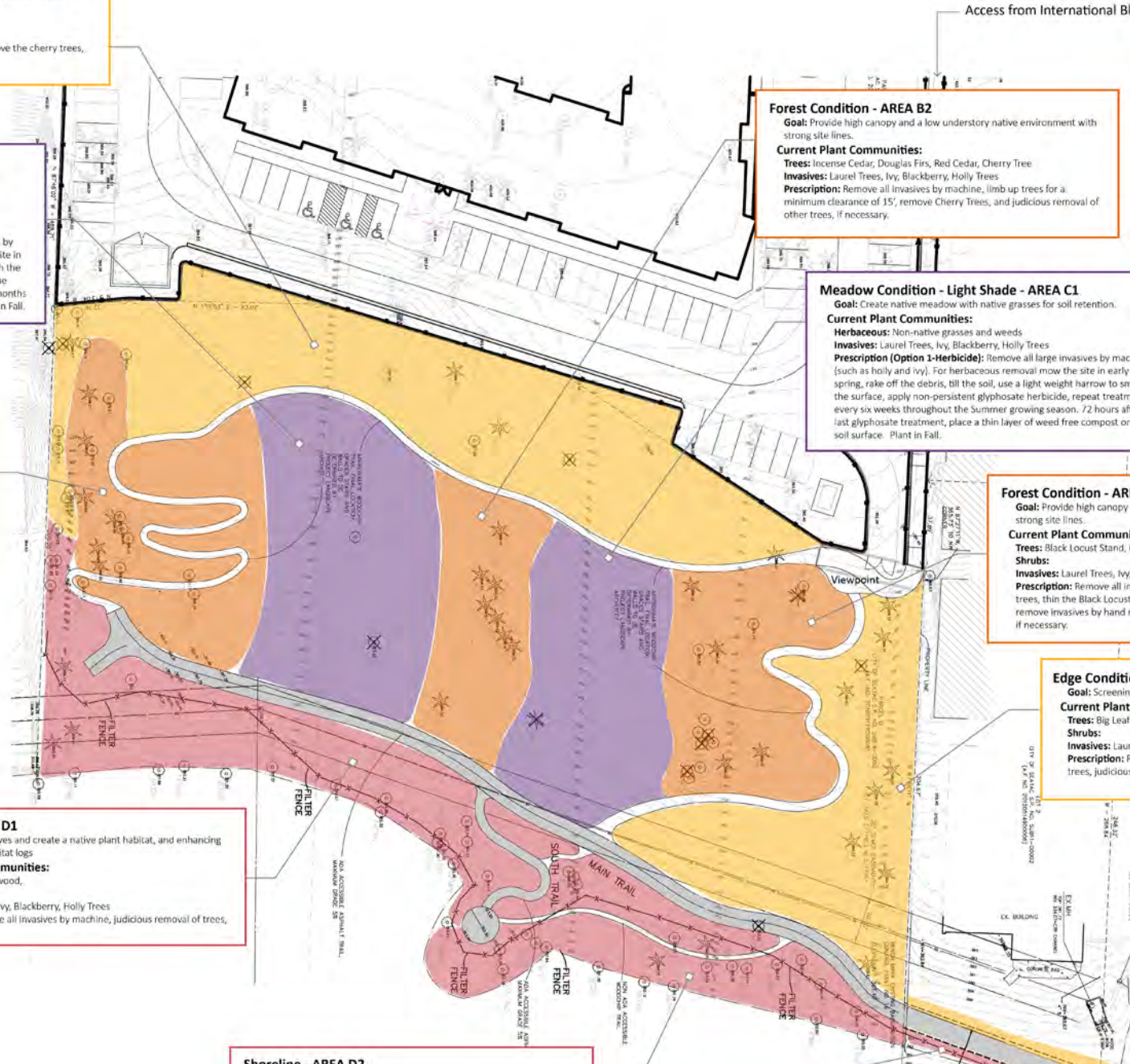
Trees: Alder, Cottonwood,

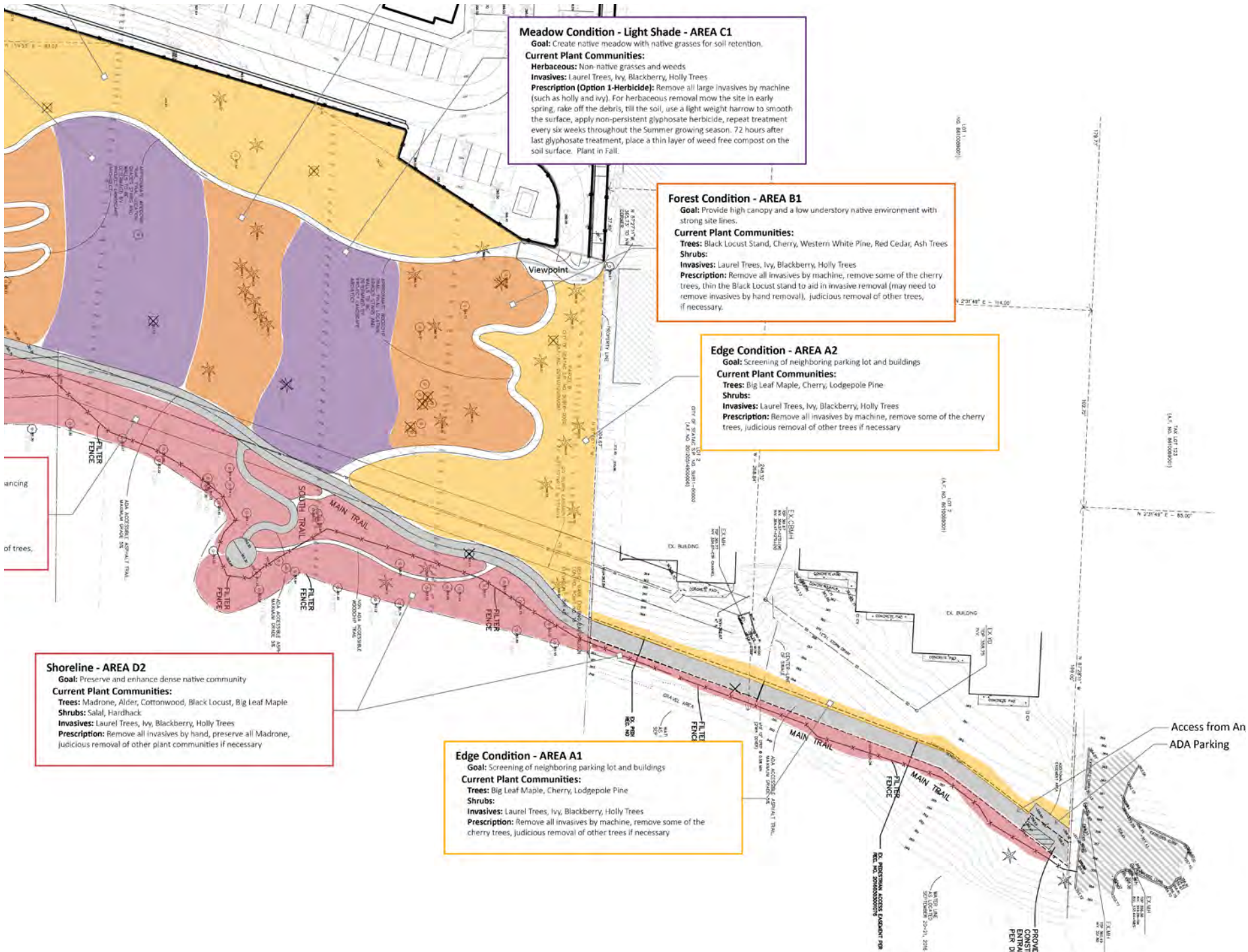
Shrubs: Hardhack

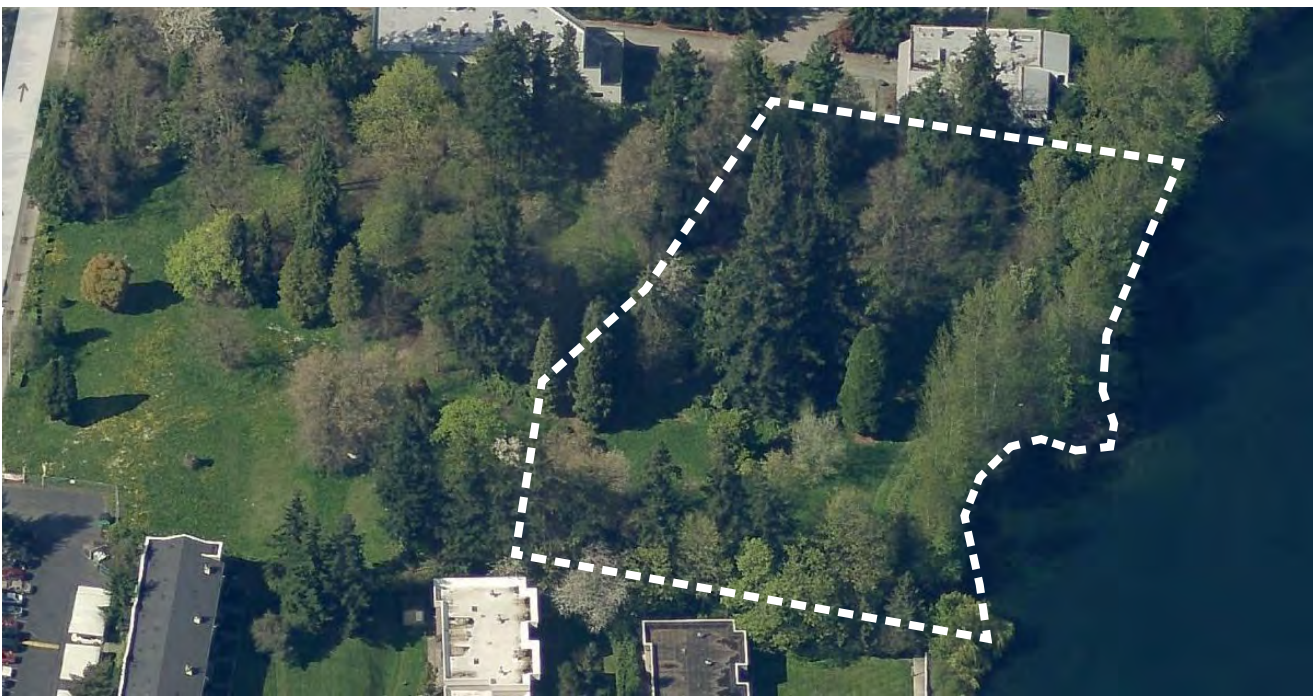
Invasives: Bamboo, Ivy, Blackberry, Holly Trees

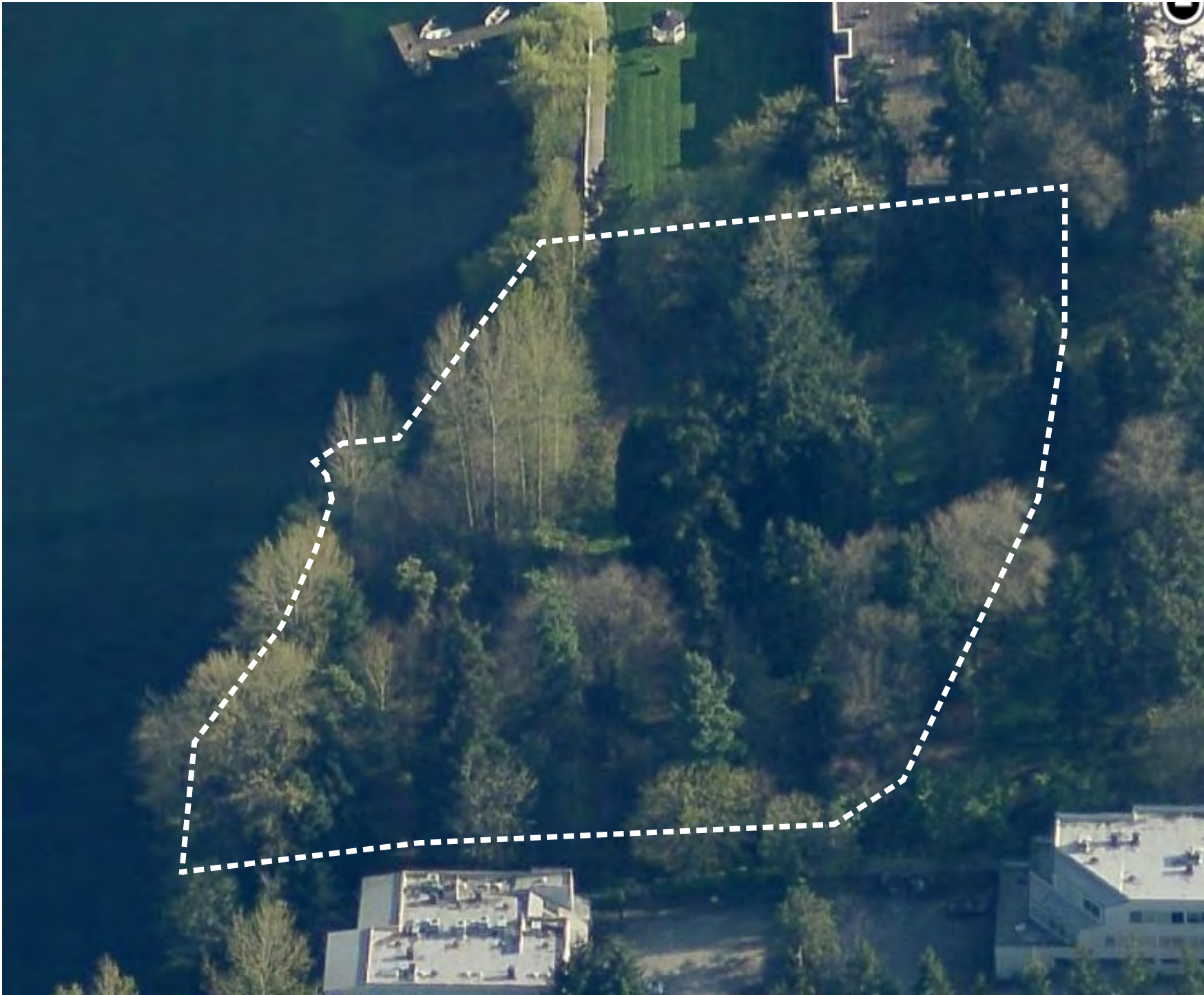
Prescription: Remove all invasives by machine, judicious removal of trees, if necessary

Shoreline - AREA D2









TRAIL SYSTEM



TRAIL SYSTEM



crushed rock pathway with log/rock edges



FENCING



PT post and rail fence with black chainlink fabric



black locust



split western red cedar fence



concrete plank post and rail fence

USING LOCAL MATERIALS

Black Locust Wood Properties



High natural durability

Heavy and hard, good strength values that clearly exceed those of the oak.

It is difficult to split, tough, **elastic and easy to bend**.

The degrees of shrinkage – as measured by the high density – are low. Once dried, the wood has a **good stability**. The drying takes place very slowly. Due to deviation of fibers and growth tensions *Robinia* wood tends to warp and crack.

However, a sufficient predrying in open air and the sealing of ends allow very good results in technical drying.

Planed surfaces are tight and flat, and can be processed further without problems.

All connections with nails, screws or adhesives are very durable. However, pre-drilling is required.

The wood is **highly acidic** and gets discolored by metals in connection with humidity. Additionally the metals corrode. Timber joints or stainless steel need to be used for mounting.

The dry **wood is odorless**. Specific ingredients (flavonoids) may possibly evoke allergic skin reactions (dermatitis, eczema) in case of sensitive persons.

The heartwood has high **natural resistance against wood destructive fungi and insects**. *Robinia* is the only kind of wood growing in Europe having resistance class 1-2 according to DIN EN 350-2.

USING LOCAL MATERIALS

the thickets of Black Locust can be thinned and used for paving, retaining walls and structures



USING LOCAL MATERIALS

the thickets of Black Locust can be thinned and used for paving, retaining walls and structures



USING LOCAL MATERIALS

Black Locust can be thinned and used for paving, retaining walls and structures

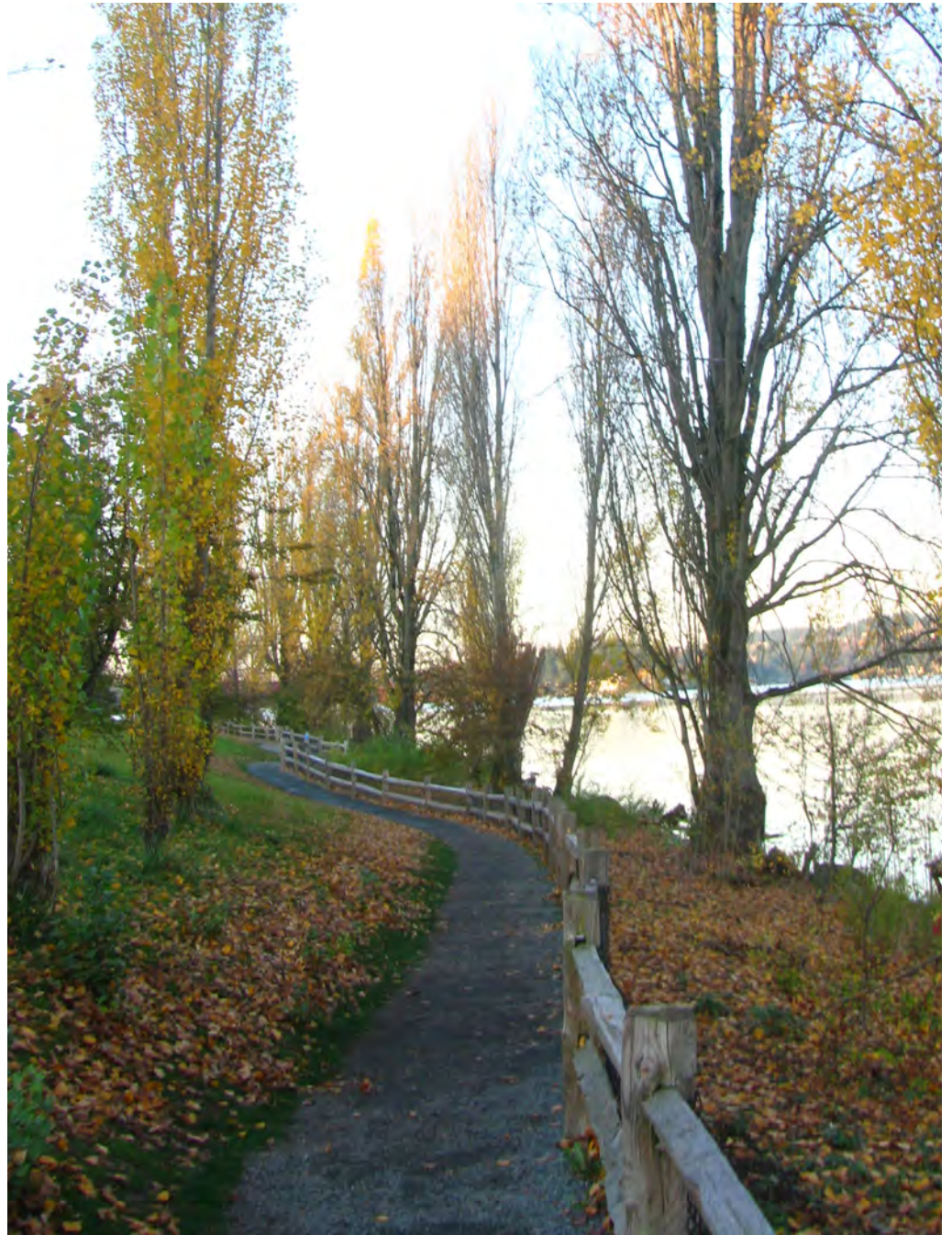


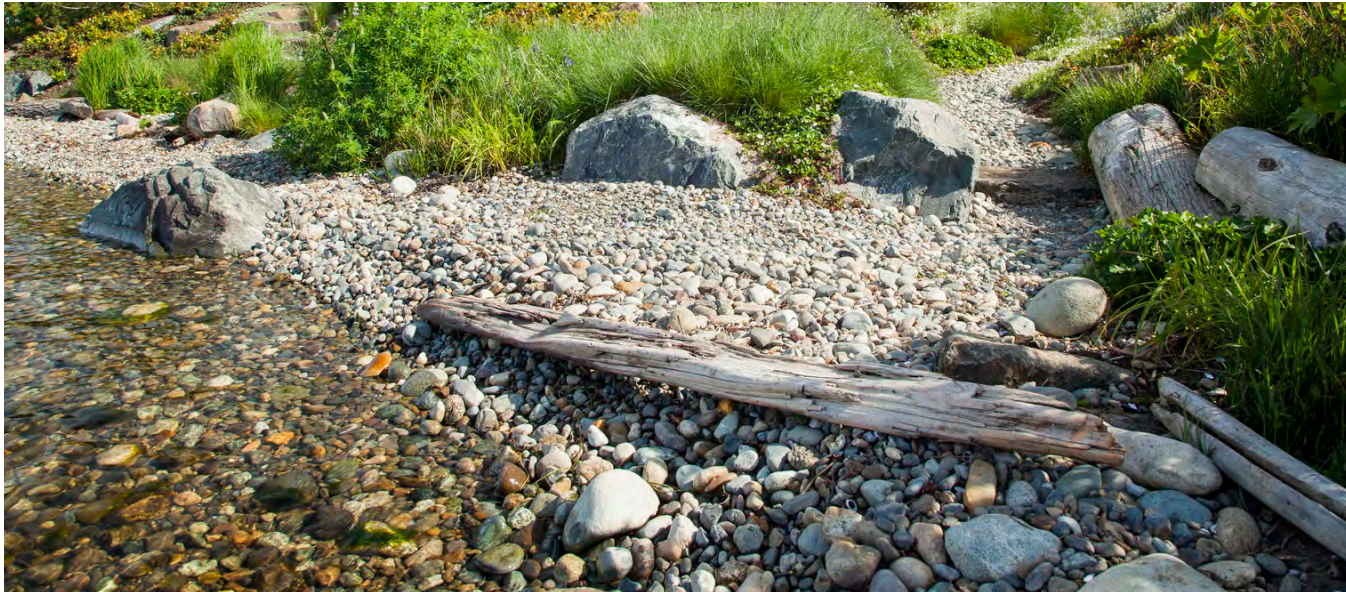
SHORELINE TREATMENT



SHORELINE TREATMENT
LAKE WASHINGTON SHORELINE
HABITAT AND ACCESS ENHANCEMENTS

Through sensitive site design we will ensure that this shoreline is enhanced and protected from overuse, while providing points of access for fishing, views of the lake, and habitat observation.





Through sensitive site design we will ensure that this shoreline is enhanced and protected from overuse, while providing points of access for fishing, views of the lake, and habitat observation.

**SHORELINE TREATMENT
LAKE WASHINGTON SHORELINE
HABITAT AND ACCESS ENHANCEMENTS**





**SHORELINE TREATMENT
WOODARD BAY NRCA**

NATURAL PLAY OPPORTUNITIES





INTERPRETIVE SIGNAGE



WHAT MAKES A HEALTHY SHORELINE?

The shoreline before you displays improvements homeowners can make to help ensure that Lake Washington remains a valued natural resource for generations to come.

Log and plants used to stabilize shoreline

Stable bank using vegetated wall & retaining log

Stable bank using stone steps & boulders

Gravelly beach with appropriately sized aggregates

HOW YOU CAN HELP MAKE A HEALTHY SHORELINE:

From testing gardens to driving cars, each of our daily activities has impacts on the environment. As we strive to improve and maintain the health of our lake and its shoreline there are simple measures each of us can take to do our part. Below is a guide showing how you can help the health of our watersheds starting at home.

Harvest rainwater using rain barrels or cisterns for reuse

Reduce or eliminate use of pesticides and herbicides

Find vehicle maintained and reduce trips

Use permeable paving materials

Minimize lawn area

Direct stormwater runoff to a swale or rain garden

HEALTHY WATER

The primary element to a healthy shoreline is **clean water**. Runoff from streets, driveways, lawns and other surfaces collects pollutants and drains into the lake. Untreated, this water can harm fish and other aquatic species. Pollutants entering the lake can be reduced by:

CREATING LESS POLLUTANTS. Reduce or eliminate the use of **fertilizers and pesticides** in your garden—even properties well away from shorelines impact water quality. Reduce **unnecessary car trips** to minimize the pollutants our roads send to our waters, including exhaust, oil leaks, tire rubber and toxic brake dust.

REDUCING OR STOPPING POLLUTANTS FROM ENTERING THE LAKE. Treatment of stormwater runoff prior to draining into the lake provides the first line of defense for protecting the lake. Treatment can take the form of mechanical vaults and filters, but an even better low-cost treatment is **passing water through non-fertilized vegetation**, such as grasses and native shrubs, prior to entering the lake.

GRAVELLY BEACHES

A great beach not only provides a nice place to **access** the lake for recreation, but also provides several **environmental benefits** as well. Gravelly beaches are recommended, as they are **less likely to erode** over time, establishing a foundation upon which important **ecological functions** may build. For example, beaches composed of an appropriately sized gravel act as an important **filter** for lakes. Voids between the tiny pebbles collect organic matter feeding "good" bacteria growing on the surface area and **reducing unwanted waste** material in the lake, thus aiding in the prevention of algae blooms.

LOGS, ROOT WADS & PLANTS

Prior to modern development, the lake shoreline was a complex **composition of natural materials** supporting a diverse community of **plants and animals**. The organic building blocks of biodiversity along shorelines are logs, root wads, branches, and plants, which provide not only a **stable structure** along the water's edge, but also **food and habitat** for insects, **birds, mammals, and fish**; salmon depend heavily on the refuge these environments create.

STABLE BANKS

Runoff enters the lake, **wave action** occurs or **floodwaters rise**; it is important to establish **stable banks** that limit soil erosion. Negative impacts of erosion include:

- Shoreline substrates are altered, killing plants and other species that depend on them.
- Shorelines are filled with sediment, increasing the risk of flooding.
- Water clarity is reduced, blocking natural sunlight access for plants and animals.
- Unwanted nutrients are released causing algae blooms.

Vegetated banks with an averaged slope of no greater than 4:1 (four horizontal feet for every one vertical foot) are recommended for stabilization. Other methods for shoreline stabilization utilized in this shoreline restoration include stone steps, retaining logs, boulders, and vegetated walls.

PROTECTING OUR LAKE

Lake Washington is one of the region's most valued natural resources; it belongs to all of us. The many activities the lake attracts to its shores and waters, however, have introduced adverse impacts on the quality of its ecological function. Once rich with habitat, the lake's shoreline has been affected by human use, both from major projects, such as dropping the lake nine feet in 1916, and smaller daily impacts such as the treatment of shorelines and gardens. Parks and property owners, particularly those on the shoreline, can play a key role in restoring a healthy balance between human use and environmental function.

Together, we can improve:

- Aesthetics and lakeside experience
- Lake access
- Water quality for recreation
- Water quality for wildlife habitat and natural processes

CITY OF MERCER ISLAND WASHINGTON



MEADOW CONDITION

Goal:

Create native meadow with native grasses for soil retention.

Current Plant Communities:

Trees: Western Red Cedars, Cherry Trees

Herbaceous: Non-native grasses and weeds

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription (Option 1-Herbicide):

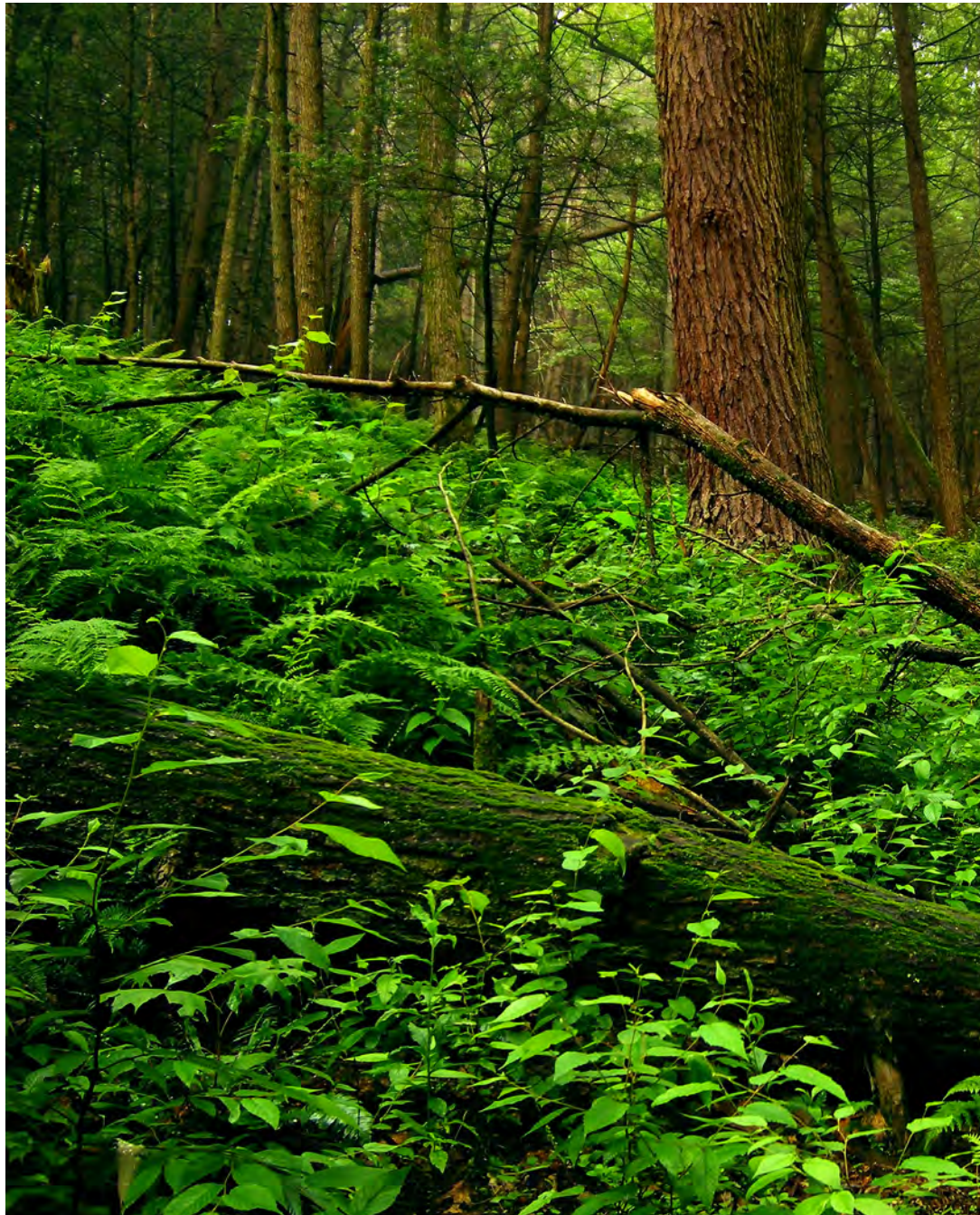
Remove all large invasives by machine (such as holly and ivy). For herbaceous removal mow the site in early spring, rake off the debris, till the soil, use a light weight harrow to smooth the surface, apply non-persistent glyphosate herbicide, repeat treatment every six weeks throughout the Summer growing season. 72 hours after last glyphosate treatment, place a thin layer of weed free compost on the soil surface. Plant in Fall.

Prescription (Option 2 - Herbicide Free):

Remove all large invasives by machine (such as holly and ivy). For herbaceous removal mow the site in early spring, rake off the debris, use a light weight harrow to smooth the surface, irrigate the site, then lay down UV stabilized plastic (bury the edges to prevent airflow), keep the plastic throughout the hottest months of the year (at least 3 months). Remove the plastic in the fall. Plant in Fall.







FOREST CONDITION

Goal:

Provide high canopy and a low understory native environment with strong site lines.

Current Plant Communities:

Trees: Black Locust Stand, Cherry, Western White Pine, Red Cedar, Ash Trees, Incense Cedar, Red Cedar, Douglas Firs

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription: Remove all invasives by machine. Remove some of the cherry trees. Thin the Black Locust stand to aid in invasive removal (may need to remove invasives by hand removal). Limb up trees for a minimum clearance of 15'. Judicious removal of other trees, if necessary.



Goal: Provide high canopy and a low understory native environment with strong site lines.









EDGE CONDITION

Goals:

Soften the large retaining wall along the East by creating a stepped native community with a large canopy and low growing native understory. Along the North the goal is to screen neighboring parking lot and buildings.

Current Plant Communities:

Trees: Western Red Cedars, Cherry Trees

Invasives: Laurel Trees, Ivy, Blackberry, Holly Trees

Prescription: Remove all invasives by machine, remove the cherry trees, judicious removal of other trees if necessary









SHORELINE CONDITION

Goal:

Remove invasives, create a native plant habitat, and enhance fish habitat.

Current Plant Communities:

Trees: Alder, Cottonwood, Madrone, Black Locust, Big Leaf Maple

Shrubs: Hardhack, Salal

Invasives: Bamboo, Ivy, Blackberry, Holly Trees

Prescription: Remove all invasives by hand, preserve all Madrone, judicious removal of other plant communities if necessary

Goal: Remove invasives, create a native shoreline habitat, and enhance fish habitat.







Thank You!



Barker
Landscape
Architects, P.S.

